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10/528,066

03/15/2005

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EXAMINER

MATTER, KRISTEN CLARETTE

ART UNIT

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3771

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/528,066 | Applicant(s) MCFARLANE, ROBERT | |
| | Examiner KRISTEN C. MATTER | Art Unit 3771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/15/2005 and 6/13/2005</u> . | 6) <input checked="" type="checkbox"/> Other: <u>EP 1210882</u> . |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 3/15/2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: outer shell 9 (page 11). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure is objected to because it includes the term “comprises” in line 1, which is considered claim language. Examiner suggests replacing “comprises” with -- includes--. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant’s use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase “Not Applicable” should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A “Sequence Listing” is required on paper if the application discloses a nucleotide or amino

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acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In the instant case, Examiner strongly suggests the use of appropriate headers.

Claim Objections

Claim 18 objected to because of the following informalities: in line 3, it appears a semicolon or comma is missing after the term "lower section". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 20, 26-28, 30, and 31-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "the second airtight seal" in line 2 and "the head cowl" in lines 2-3. There is insufficient antecedent basis for these limitations in the claim.

Claim 20 recites the limitation "the second rigid helmet" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "the first visor aperture" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the first and second visors" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the oxygen mask suspension system aperture" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claims 27, 28, and 32-37 are dependent on a rejected claim base and are therefore rejected for the reasons outlined above with respect to those claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6, 8-12, 14-22, and 26-28 are rejected under 35 U.S.C. 102(a) as being anticipated by Epperson et al. (EP 1 210 882 A2).

Regarding claims 1-3, 5, 6, 9, 10, 14, Epperson et al. discloses an integrated respirator made from a material that protects against biological hazards (see paragraph 0021) comprising a tight fitting first rigid helmet (20) having an aperture (Figure 1) and a flexible cowl (70) completely enclosing the first rigid helmet and connected to an inner surface of the first rigid helmet (abstract) having an airtight neck seal (70b), a second rigid helmet (10) suitable for locating over the first rigid helmet, an air tight oxygen mask (76), and a visor (74).

Regarding claims 8, 11, and 12, Epperson et al. discloses that the flexible cowl comprises a visor aperture, an oxygen mask location area, a visor mist supply, and a pressure release valve (paragraph 0020). Depending on how the "oxygen mask location area" is defined, the area can be said to have a single aperture (i.e., 76g for example) or multiple apertures (76g, 76h). The term "area" as written in the claims and defined in the specification does not add any definite structural limitation to the claim beyond some sort of area where at least part of an oxygen mask can be located.

Regarding claims 15, 16, 18, and 19, Epperson et al. discloses that the cowl includes shroud (70c) that can be considered a detachable lower portion (i.e., because the front face or "head cowl" of the hood can be detached from the shroud) connected to a detachable front face/head cowl by a zip airtight seal (paragraph 0021). Note that although Epperson et al. does not explicitly disclose a channel, beading edge, and zip mechanism, all slide/zip fasteners inherently have a channel and edge that must be associated with the channel for producing the seal.

Regarding claim 17, for example, the holes in the hood for the screws (see Figures 2B and 4C) can be considered attachment point access holes with compression seals because a seal is created between the hood and the inner lining or straps by the compression generated by the threads. Again, the terms "attachment point access holes" and "compression seals" do not add any definite structural limitation to the claim so long as the hood comprises holes in which something can be attached and a seal that is created by a compressive force.

Regarding claim 20, Epperson et al. discloses an energy absorbing liner (paragraph 0016) and threaded attachment points for connecting the second and first rigid helmets (paragraph 0013).

Regarding claim 21, Epperson et al. discloses ear phones (78) with at least one ear phone aperture (78a).

Regarding claim 22, the various slots in the helmet or the attachment of the outer helmet to the inner helmet can be considered attachment means suitable for connecting oxygen mask mounting means (i.e., straps) to the first rigid helmet.

Regarding claims 26-28, Epperson et al. discloses a visor located in a visor aperture in the cowl (paragraph 0020 and Figure 2B) providing an air tight seal and allowing means for adjusting the position of the visor relative to the first rigid helmet to a displaced position that would aid in the donning and doffing of the integrated respirator (i.e., by adjusting the straps such as 19 connected to the helmet, the visor located in the visor aperture of the cowl would move relative to the helmet). Again, the term "displaced position suitable for aiding the donning and doffing of the integrated respirator" does not add any definite structural limitation to the claim.

Claims 1-7, 10, 14, 26, 27, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ersteniuk (US 4,975,980).

Regarding claims 1, 2, 4, 5, and 6, Ersteniuk discloses an integrated respirator that provides an airtight fit and hazardous barrier for a user comprising a first rigid helmet (12), and a flexible cowl (16) having an airtight neck seal and the flexible cowl is sealably fixed to the

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interior of the first rigid helmet at the periphery of an access aperture (see figure 6 and column 2, lines 25-33).

Regarding claim 3, the cowl of Ersteniuk completely encloses the first rigid helmet (see Figure 4).

Regarding claim 7, Ersteniuk further discloses a hood (ear flaps 14) fixed to the first rigid helmet so providing a physical barrier for the flexible cowl (see column 2, lines 25-33).

Regarding claims 10 and 14, Ersteniuk discloses an air tight oxygen mask and visor (see Figure 5) in the system.

Regarding claim 26, the large opening in the front of the cowl can be considered a visor aperture that would help provide the airtight seal (see figure 5).

Regarding claims 27 and 28, the straps of the mask/visor assembly would provide means for adjusting the position of the visor relative to the first helmet to a displaced position for aiding in donning and doffing the device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 13, and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epperson et al.

Regarding claim 4, to the extent, if any, that Epperson et al. does not specifically disclose the hood being connected to the periphery of the access aperture (although Epperson et al. discloses that the cowl is connected to the interior of the helmet), examiner contends that it would have been an obvious design consideration to one of ordinary skill in the art at the time the invention was made to have connected the cowl to the entire interior of the helmet thereby also including connecting the cowl to the periphery of the access aperture.

Regarding claim 13, although Epperson et al. does not disclose that the oxygen mask is specifically coated with barrier for nuclear, biological, and chemical hazards, these coatings are well known in the art (and as apparent from Applicant's lack of description of the coatings in the specification), and it would have been obvious to one of ordinary skill in the art to provide Epperson et al.'s device with a barrier coating in order to protect the mask and further protect the user from biological and chemical hazards. In addition, because the mask disclosed by Epperson et al. is for use in contaminated environments, it appears as though the device disclosed by Epperson et al. would perform equally well with the mask coated with a barrier against chemical and biological hazards.

Regarding claims 31 and 33-35, the device disclosed by Epperson et al. has all of the structural limitations needed to perform the recited method steps and is fully capable of being fabricated by the claimed method. It would have been obvious to one of ordinary skill in the art at the time the invention was made, upon seeing Epperson et al.'s device, to perform the recited method steps of the instant claim, including the fabricating the cowl by vacuum forming and seam welding, injection molding and locating the visor, and attaching the cowl because assembly of Epperson et al.'s device appears to result from the claimed method. Furthermore, vacuum

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forming and seam welding are well known fabrication techniques for the type of disclosed flexible cowl materials as is injection molding for plastic visors (as is also apparent from applicant's lack of description in the specification) and it therefore would have been obvious to one of ordinary skill in the art at the time of the invention to integrated respirator from the claimed method.

Regarding claim 32, the screws for attaching the first and second helmets (paragraph 0016) are considered location points to ensure the cowl is correctly located on the first rigid helmet that also provide the means for connecting the helmets.

Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epperson et al. as applied to claims 1-3, 5, 6, 8-12, 14-22, and 26-28 above, and further in view of Palmaer et al. (US 4,556,121). Epperson et al. does not disclose details to the earphone mounts. However, Palmaer et al. discloses retractable earphone mounts for use in helmets comprising a bias means (the various resilient materials -- see column 1, lines 59-63) to hold the earphone in a first position and a retracting means (drawstring 20 -- see column 4, lines 1-15) suitable for overcoming the bias means such that the earphone can be moved to a second position for aiding in donning and doffing the helmet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a retractable earphone mount as disclosed by Palmaer et al. to the device of Epperson et al. for allowing a user to correctly locate the earphone a certain distance from his or her ear and for aiding in the donning and doffing of the helmet (see column 1, lines 19-25 and column 4, lines 3-5). In addition, Palmaer et al. discloses the drawstring as threaded through an aperture (i.e., an access aperture) of the helmet. Either the

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cushioning seen in Figure 4 or the fact that the string is attached to the rings which are attached to the first helmet (column 2, lines 3-6) provides a securing means to which the draw string is attached to maintain the earphone mount in the second position.

Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epperson et al. as applied to claims 1-3, 5, 6, 8-12, 14-22, and 26-28 above, and further in view of Arai (US 6,161,225).

Regarding claim 29, Epperson et al. is silent as to a second visor on the second rigid helmet. However, Arai discloses a helmet system with a first and second visor (abstract and column 2, lines 5-20) for the purpose of helping to prevent misting (column 1, lines 29-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the outer helmet of Epperson et al. with a second visor as taught by Arai in order to help prevent fogging on the visor.

Regarding claim 30, Epperson et al. and Arai are silent as to the material of the visor(s). However, because the visors are transparent they can be said to have a "high optical quality" and any plastic or glass material would provide at least some barrier against biological hazards. The use of the term "high optical quality" is relative and not clearly defined in the specification.

Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epperson et al. as applied to claim 31 above, and further in view of Grau (US 6,405,373). Epperson et al. is silent as to coatings on the inner and outer surface of the visor for anti-fogging and protection from biological hazards. However, Grau discloses a protective helmet with

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coatings on the inner and outer surfaces of the visor (column 2, lines 32-33 and line 42).

Therefore it would have been obvious to one of ordinary skill in the art to coat the inner surface of Epperson et al.'s visor with an anti-fogging agent to help prevent condensation and to coat the outer surface of the visor with a barrier against biological hazards in order to further protect the user from contaminants in a compromised environment. In addition, it appears as though the visor of Epperson et al. would perform equally well with the coatings and applicant's lack of description in the specification appears to reinforce that these types of coatings are well known in the field.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schegerin, Andrews et al., Reed, Bello, Gardner et al, Canda, and Grove et al. are cited to show other similar hood/helmet assemblies, Scudder et al., Volkmann, and Lastnik are cited to show other adjustable ear phone mounts in a helmet, and Chang is cited to show another multiple layer helmet assembly. Please also note that applicant's cited reference GB 1 462 361 is also deemed highly significant to the instant invention and presents a statutory bar over many of the claims rejected above by other references as well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTEN C. MATTER whose telephone number is (571)272-5270. The examiner can normally be reached on Monday - Friday 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kristen C. Matter/
Examiner, Art Unit 3771

/Justine R Yu/
Supervisory Patent Examiner, Art Unit 3771